

REMARKS

Claims 19, 20, 22, 23, and 30 remain in this application with claim 19 in independent form. Claim 19 has been amended.

Claim 23 stands rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner contends that nowhere in the original specification is there support for the structural element “elastomer layer is bonded to an outer surface of said molding.”

In accordance with MPEP 2163.06, "...information contained in *any one* of the specification, claims or drawings of the application as filed *may be added to any other part* of the application without introducing new matter" (emphasis added). The subject application is directed toward a composite damping element received in one of a transverse, longitudinal, or triangular link, a rear-axle subframe, a stabilizer, a spring-strut support, and a shock-absorber capable of replacing rubber-metal damping composites. More specifically, the composite damping element is formed a microcellular polyurethane elastomer layer that is produced in direct contact with a thermoplastic polyurethane (TPU) molding, as described in the examples, see page 10, lines 14-18.

The specification as originally filed does not limit the configuration or orientation of the thermoplastic polyurethane molding and the microcellular polyurethane elastomer layer. It is only necessary to bond the elastomer layer in direct contact with the at least one surface of the molding. Thus, the specification as originally filed has implicit support for any orientation, including the elastomer layer bonded to an outer or an inner surface of the molding. Additional

support can be found at the following: Page 1, lines 20-34; Page 4, lines 43-47, Page 5, lines 1-5; Page 9, lines 4-16; Page 9, lines 22-27; Page 10, lines 14-36.

Further, damping elements are well known to those of ordinary skill in the art as shown in Exhibit A. Exhibit A includes portions of an English version of "Fahrwerktechnik: Radaufhangungen", 2nd Edition, ed. Prof. Dipl. -Ing. Jornsen Reimpell, Vogel Buchverlag Wurzburg, which is discussed on page 1, lines 23-26, of the specification as originally filed.

Specifically, Applicant directs the Examiners attention to pages 13, 205, 369 and 370 which are attached in Exhibit A. Exhibit A illustrates numerous prior art damping elements having different orientations and configurations of the rigid metal and flexible rubber. Page 13 illustrates one damping element, shown as a shock-absorber bearing in Figure 1.10, having rubber supported both on an inner face of one metal and an outer face of another metal. Referring now to Figure 3.85 on page 205, a transverse link bearing is shown having two rubber parts 4 around a metal inner tube 1. The rubber 4 is vulcanized to and surrounds an outer face of the inner tube 1 and an inner face of the ring 2. With reference to Figure 5.45 on page 369, an eye-type joint for a shock-absorber is shown having rubber surrounding an outer face of a metal tube and adhered to an inner face of a metal plate. Figure 5.46 on page 370 illustrates a pin-type joint that includes rubber on an inner face of one metal plate and an outer face of another metal plate.

Those of ordinary skill in the art, upon reading the subject application, specifically, page 9, lines 4-9, in view of "Fahrwerktechnik: Radaufhangungen" would find adequate support for the structural element "elastomer layer is bonded to an outer surface of said molding" of claim

23. Thus, it is appreciated that those of ordinary skill in the art recognize that the necessary structure, or configuration, to replace any such prior art rubber-metal composites is inherent in the composite damping element of the subject invention. Accordingly, it is believed that the 35 U.S.C. §112 rejection is overcome.

Claims 19, 20, and 22 stand rejected under 35 U.S.C. §102 as anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over Renzo (French Patent 2559862). Applicant attaches herewith, as Exhibit B, a copy of Renzo including Figures 1-11.

Claim 19 has been amended to claim a motor vehicle composite damping element comprising i) a *rigid* thermoplastic polyurethane molding and ii) a *flexible* microcellular polyurethane elastomer layer chemically bonded to and in direct contact with at least one surface of the *rigid* thermoplastic polyurethane molding. The rigid thermoplastic polyurethane molding supports the microcellular polyurethane elastomer layer while dampening and absorbing vibrations occurring within the transverse link, the longitudinal link, the triangular link, the rear-axle subframe, the stabilizer, the spring-strut support, or the shock-absorber.

There is full support in the specification as originally filed for the subject amendment. With reference to the discussion above, it is well known that damping elements for a transverse link, a longitudinal link, a triangular link, a rear-axle subframe, a stabilizer, a spring-strut support, or a shock-absorber of a motor vehicle have heretofore been manufactured from rubber-metal composites. The prior art rubber-metal composite used in the shock-absorber of the motor vehicle has the metal portion supported by a shaft within the shock-absorber and the rubber portion positioned to absorb and dampen vibrations received by the shock-absorber. The

rigid thermoplastic polyurethane molding has replaced the metal component and the *flexible* microcellular layer has replaced the rubber component. As discussed at length in the specification as originally filed, these prior art rubber-metal composites have disadvantages that include high density of the metal constituents, short service life of the rubber, and loss of adhesion between the rigid metal and the flexible rubber (*see page 1, lines 20-34 of the originally filed specification*). The subject invention overcomes these disadvantages.

Renzo, on the other hand, discloses a composite shock absorber, such as a jounce bumper, that is well known to those of ordinary skill in the art. The shock absorber includes a cellular elastic 51 surrounded by a thermoplastic polyurethane bellow 50. Referring to Figure 6 of Exhibit B, the shock absorber is shown in a compressed state. As can be seen, the polyurethane bellow 50 is also compressed. Therefore, the polyurethane bellow 50 is flexible to accommodate such compression. Accordingly, Renzo does not disclose a rigid thermoplastic polyurethane molding as now claimed. Therefore, the 35 U.S.C. §102 rejection is believed to be overcome.

In the alternative, Renzo does not disclose, teach, or suggest the bellow 50 being rigid. In order for the shock absorber to absorb shocks, the bellow 50 must be able to compress and distribute the shock to the cellular elastic 51. Therefore, Renzo teaches away from forming the bellow 50 from a rigid material. Additionally, since the bellow 50 is flexible and not rigid, each and every limitation as claimed is not disclosed in Renzo. It is respectfully submitted that the claims as amended overcome the 35 U.S.C. §103 rejection.

Claim 30 depends, directly or indirectly, from allowable claim 19 and thus claim 30 is also believed to be allowable.

Accordingly, it is respectfully submitted that the Application, as amended, is now presented in condition for allowance, which allowance is respectfully solicited. Applicant submits a check for the required fees, however, if any other or additional fees become required, the Commissioner is hereby authorized to charge such fees or credit any overpayments to Deposit Account 08-2789.

Respectfully submitted
HOWARD & HOWARD ATTORNEYS, P.C.

February 23, 2006

Date

/Kristopher K. Hullibarger/

Kristopher K. Hullibarger, 53,047
The Pinehurst Office Center, Suite #101
39400 Woodward Avenue
Bloomfield Hills, Michigan 48304
(248) 723-0453